CLAIMS

1. Pneumatic servomotor for an assisted braking, comprising a casing (2) having a longitudinal axis (X) and in which a low-pressure chamber (10) and a variable-pressure chamber (8) are defined, in an airtight manner, by a moving partition wall (12) bearing a pneumatic piston (18) in its middle part, a three-way valve (20), arranged at the rear part of the pneumatic piston (18) and controlled by an actuating rod (27), the three-way valve comprising a valve (22) for a reequalization between the low-pressure chamber (10) and the variable-pressure chamber (8), and a valve (24) for the high-pressure supply of the variable-pressure chamber (8), said supply valve comprising a valve seat, borne by a first longitudinal end of a distributor plunger (28) and receiving a longitudinal end of the actuating rod (27), said distributor plunger (28) having, at a second longitudinal in the opposite direction relative to the first longitudinal end, a finger (30), which is perpendicular to the longitudinal axis (X) and which comes into contact with a face of a reaction disk (32) on a braking operation, said reaction disk being accommodated in a housing (34) integral with a push rod (36) for the actuation of a master cylinder, said housing (34) comprising a pneumatic braking-assistance device (D) fitted with a cage (38), a first closed longitudinal end of which is integral with the push rod (36) while its second open longitudinal end is closable by an annular ring (44) integral with the cage (38) and by a reaction piston (42) fitted for a sliding travel inside the ring (44) along the longitudinal axis (X), said piston being reactionnally kept against the ring (44) by a resilient means (40) having a prestress (ch) and bearing by its

rear end on the closed first end of the cage (38), and wherein the area consisting of the rear faces (50, 52) of the annular ring (44) and of the reaction piston (42), respectively, constitutes the front longitudinal end of the housing (34) of the reaction disk, characterised in that said device comprises plastically-deformable means (68, 74) for the adjustment of the braking characteristics.

2. Servomotor according to claim 1, characterised in that the resilient means (40) is a helical spring.

3. Servomotor according to claim 1 or claim 2, characterised in that the first means (68) are capable of setting a predetermined value (Vj) to a clearance (j) between the planes containing the rear faces (52, 50) of the reaction piston (42) and of the annular ring (44), respectively.

4. Servomotor according to the preceding claim, characterised in that the first means (68) are disposed between a front face (66) of the annular ring (44) and a rear face (62) of a flange (60) extending radially outwards from the periphery of the body of the reaction piston (42).

5. Servomotor according to the preceding claim, characterised in that said first means (68) consist of a collar.

6. Servomotor according to claim 4, characterised in that said first means (68) consist of a ring-shaped protrusion, made in one piece with the annular ring (44) and extending axially forwards from the front face (66) of the annular ring.

7. Servomotor according to claim 4, characterised in that said first means (68) consist of a ring-shaped protrusion, made in one piece with the flange (60) and extending axially rearwards from the

rear face (62) of the flange (60).

8. Servomotor according to any one of the preceding claims, characterised in that the second means (74) are capable of setting a predetermined value (Vch) to the stressing (ch) of the resilient means (40).

9. Servomotor according to the preceding claim, characterised in that the second means (74) are accommodated inside the emergency-braking assistance device (D) so as to modify the axial position of the closed first end of the cage (38) relative to the reaction piston (42).

10. Servomotor according to the preceding claim, characterised in that the second means (74) consist of a collar, disposed between the front face (66) of the annular ring (44) and the rear face of an inner bearing surface (47) of the cage (38).

11. Servomotor according to claim 9, characterised in that the second means (74) consist of a ring-shaped protrusion, made in one piece with the annular ring (44) and extending axially from the front face (66) of the annular ring towards an inner bearing surface (47) of the cage (38).

12. Servomotor according to claim 9, characterised in that the cage (38) comprises a sleeve (381), which is closed at its first front longitudinal end (383) by a cap (382) integral with the push rod (36), and in that the second means (74) are disposed between the front longitudinal end of the sleeve (381) and a rear face of the cap (382).

13. Servomotor according to the preceding claim, characterised in that the second means (74) consist of a ring-shaped protrusion, made in one piece with the sleeve (381) and extending axially towards the cap (382).

14. Servomotor according to claim 12 or claim 13, characterised in that said cap (382) is interlocked with the sleeve (381) by means of a ring-shaped extension, which is arranged radially outside relative to the ring-shaped protrusion constituting the second means (74), and capable of folding over onto the front face of the cap (382) owing to a plastic deformation.

15. Manufacturing process for a pneumatic servomotor for an assisted braking, fitted with an emergency-braking assistance device according to any one of the preceding claims, characterised in that it comprises, among other features :

- a preliminary step, in which the first means (68) are plastically deformed in an axial direction so as to set a predetermined value (Vj) to the clearance (j) between the rear faces (52, 50) of the reaction piston (42) and of the annular ring (44), respectively ;
- a subsequent step, in which the second means (74) are plastically deformed in an axial direction so as to set a predetermined value (Vch) to the stressing (ch) of the resilient means (40).

16. Device for the implementation of the preliminary step of the process according to the preceding claim, characterised in that it comprises a first element (202) and a second element (204), movable relative to the first element (202) along the longitudinal axis (X), said first element (202) having a reference surface, which defines the predetermined value (Vj) of the clearance (j), while the second element (204) comprises a ring-shaped pressing surface, which cooperates with the front face (64) of the flange (60) of the reaction piston (42).

17. Device for the implementation of the subsequent step of the process according to claim 15,

characterised in that it comprises a third element (302) and a fourth element (304), movable relative to the third element (302) along the longitudinal axis (X), said third element having a ring-shaped supporting surface for the front face (66) of the annular ring, and a means (307) for the detection of the force applied to the reaction piston (42) by the resilient means (40), while the fourth element (304) comprises a surface for a force application to the cage (38), so as to deform the second means (74) plastically in the course of an axial travel of the fourth element (304) towards the third element (302), in such a way that the stressing of the resilient means (40) is equal to the predetermined value (Vch).